

I claim:

1 A dumbbell which comprises:

a handle tube having an interior surface;

said interior surface having an interior thread extending from one end to the opposite end of the handle tube;

a pair of stop plates;

each said stop plate having an aperture centrally located in each stop plate, respectively;

one of said stop plates mounted perpendicularly and concentrically on one end of said handle tube and another one of said stop plates mounted perpendicularly on an opposite end of said handle tube;

said interior surface having a straight groove extending from one end to an opposite end of said handle tube;

a pair of shafts, one shaft for each end of said handle tube;

each shaft having a retainer plate mounted perpendicularly and concentrically on one end of said each shaft;

each shaft having a linear partial thread mounted on a surface of said each shaft;

said partial thread extending from one end to an opposite end of said shaft, respectively;

one plurality of weight plates, each said weight plate having a centrically located aperture to permit mounting said one plurality of weight plates on one said shaft by inserting said shaft through said apertures; and

another plurality of weight plates, each said weight plate having a centrically located aperture to permit mounting said another plurality of weight plates on another one of said pair of shafts by inserting said another one shaft through said apertures in said another plurality of weight plates;

each said shaft having a diameter and said partial thread having a pitch and width and said interior thread having a pitch and said groove having a width all arranged in operable

combination to permit aligning said partial thread with said groove then telescoping each said shaft into an interior at respective ends of said tube, then turning said shaft to engage said partial thread on said shaft with said partial thread whereby said shaft is detachably secured to said handle tube and said one and another plurality of weights are secured between said one and another retainer and stop plates, respectively.

2. The dumbbell of claim 1 wherein all of said weight plates have a common thickness from one end of said aperture to an opposite end of said aperture.

3 The dumbbell of claim 2 wherein all of said weight plates have a thickness from one end of said aperture to an opposite end of said aperture equal to a multiple of a common thickness.

4. The dumbbell of claim 3 wherein said common thickness is a multiple of said pitch of said internal thread.

5. The dumbbell of claim 4 wherein:

each said shaft has a linear scale of indicia representing distance formed in a straight line from adjacent said respective retainer plate to an opposite end of said respective shaft;

said handle tube has a pair of openings in a side of said handle tube, one said opening proximal to one said stop plate and another said opening proximal to said other stop plate arranged in operable combination with said shafts screwed into respective ends of said handle tube to indicate an amount of weight of said pluralities of weight plates retained between said retainer plate and said respective stop plate.

6 The dumbbell of claim 1 wherein at least one of said retainer plates is a composite plate of an elastomeric layer laminated to a metal plate;

7 The dumbbell of claim 3 wherein each said weight plate has an edge that is oblique to a centerline of said respective weight plate.

8 A dumbbell which comprises:

a handle tube having an interior surface:

said interior surface having an interior thread extending from one end to an opposite end of said handle tube;

a pair of stop plates;

each said stop plate having an aperture centrally located in said respective stop plate;

one of said stop plates mounted perpendicularly and concentrically on one end of said handle tube and another and another one of said stop plates mounted perpendicularly and concentrically on an opposite end of said handle tube;

said interior surface having a straight groove extending from one end to an opposite end of said handle tube;

a pair of shafts, one shaft for each end of said handle tube;

each shaft having a retainer plate mounted perpendicularly on one end of said respective shaft;

each shaft having a linear partial thread mounted on a surface of said shaft;

said partial thread extending from one end to an opposite end of said shaft;

said shaft having a diameter and said partial thread having a pitch and width and said handle tube having an interior diameter and said interior diameter thread having a pitch

and said groove having a width all arranged in operable combination to permit aligning said partial thread with said groove then telescoping said shaft into an interior of said tube, then turning said shaft to engage said partial thread on said shaft with said thread on said interior surface of said tube whereby said shaft is detachably secured in said handle tube;

one plurality of weight plates with apertures centrally located in each weight plate for mounting on one end of said handle tube by inserting one said shaft through said apertures and screwing into said one end of said handle tube; and

another plurality of weight plates with apertures in each weight plate for mounting on another end of said handle tube by inserting another said shaft through said apertures and screwing into said another end of said handle tube;

each of said weight plates having a thickness that is a multiple of a common thickness from one end of said aperture to an opposite end of said aperture;

said common thickness being a multiple of said pitch of said internal thread;

each said shaft having a linear scale of indicia representing distance formed in a straight

line from adjacent said respective retainer plate to an opposite end of said respective shaft;

said handle tube having a pair of side openings in a side of said handle tube, one said opening proximal to one stop plate and another said opening proximal to said other stop plate arranged in operable combination with said shafts screwed into respective ends of said handle tube to indicate an amount of weight of said pluralities of said weight plates retained between said retainer plate and said respective stop plate;

at least one of said retainer plates being a composite plate of and elastomeric layer laminated to a metal plate;

each said weight plate having an edge that is oblique to a centerline of said respective weight plate.